# *Overview*

## History

By the early 1980s, scientific research clearly showed that personal health behaviors played a major role in premature morbidity and mortality. Although national estimates of health risk behaviors among U.S. adult populations had been periodically obtained through surveys conducted by the National Center for Health Statistics (NCHS), these data were not available on a state-specific basis. This deficiency was viewed as critical for state health agencies that have the primary role of targeting resources to reduce behavioral risks and their consequent illnesses.

About the same time as personal health behaviors received wider recognition in relation to chronic disease morbidity and mortality, telephone surveys emerged as an acceptable method for determining the prevalence of many health risk behaviors among populations. In addition to their cost advantages, telephone surveys were especially desirable at the state and local level, where the necessary expertise and resources for conducting area probability sampling for in-person household interviews were not likely to be available.

As a result, surveys were developed and conducted to monitor state-level prevalence of the major behavioral risks associated with premature morbidity and mortality. The basic philosophy was to collect data on actual behaviors, rather than on attitudes or knowledge, which would be especially useful for planning, initiating, supporting, and evaluating health promotion and disease prevention programs. Data derived from the questionnaire provide health departments, public health offices, and policymakers with necessary behavioral information. When combined with mortality and morbidity statistics, these data enable public health officials to establish policies and priorities and to initiate and assess health promotion strategies.

In 1984, the Behavioral Risk Factor Surveillance System (BRFSS) was established to collect prevalence data on risk behaviors and preventative health practices that affect health status. The Centers for Disease and Control and Prevention (CDC) developed a standard core questionnaire for states to use to provide data that could be compared across states. Individual states were also allowed to add questions in order to gather additional information on topics of specific interest to them. The South Dakota Department of Health (SDDOH) initiated the BRFSS in South Dakota in 1987 with the assistance of the CDC. By 1994, all states, the District of Columbia, and three territories were participating in the BRFSS.

## Purpose

- The main purpose of the BRFSS at the state level is for Department of Health program support. Each year the optional content of the survey is planned in collaboration with various SDDOH programs in order to gather useful data. The data are then used by the programs in order to determine priority health issues and identify populations at highest risk. This leads to effective program planning, initiation, support, and evaluation of health promotion and disease prevention programs.

- Data collected through the BRFSS will be used by the SDDOH to increase awareness and educate the public, the health community, and policymakers regarding health matters through responses to media inquiries, reports, and publications. The report is sent to private and public health officials throughout South Dakota to aid in program efforts to favorably influence public health issues.

- A national agenda has been developed to challenge Americans to improve their health to certain degrees by the year 2010. This agenda is called the ***Healthy People 2010 National Health Objectives***. Its purpose is to commit the nation to the attainment of three broad goals:

  1) Increase the span of healthy life for all Americans
  2) Reduce health disparities among Americans
  3) Achieve access to preventive services for all Americans

  Where appropriate, BRFSS data is used by the SDDOH to measure South Dakota's progress toward Healthy People 2010 goals.

**Report Description**

The 2003 report marks the beginning of a new format for presenting our BRFSS data. We have attempted to present more comprehensive data in a standard format that is easier to read. It includes several sections covering major indicators from the survey. Each section is organized in the following manner.

- A definition of the indicator is given.

- The prevalence of the indicator in South Dakota and nationwide, when available, is given.

- The relevant Healthy People 2010 objective is given when applicable.

- A time trend analysis is given for each indicator as far back as comparable data have been gathered. This includes a dashed trend line as well as the actual data results for each available year. Multiple years of data are very valuable for not only analyzing the trend of the indicator, but also helps to show the variability in some indicators.

- A comprehensive demographic breakdown is then covered with a table and text. Certain data points from the table have been highlighted with the text, especially when there are significant differences between demographic subgroups. Rates for specific subpopulations are considered significantly different when their confidence intervals do not overlap. This table is important because it can identify demographic subgroups at highest risk.

- A national map is then displayed when available that shows the given health indicator among states. States are then shaded if their indicator is significantly higher or lower than the national rate. This map is useful because it can show how South Dakota compares with other states as well as any national geographic patterns.

- A further analysis is then done that illustrates the prevalence of the given health indicator for other health behaviors or conditions. For example, the prevalence of fair or poor health by body mass index, or the prevalence of high blood cholesterol by physical activity. This further analysis is not designed to show the cause and effect of certain behaviors or conditions since there are several factors that influence these indicators. It is simply the prevalence of the given health indicator by the other health behaviors and conditions from the survey. This is a step beyond the demographic breakdown and hopefully helps programs to target their subpopulations of interest even better.

- Any additional data gathered on the given topic will be covered following the further analysis section.

Table 1, below, shows the estimated risk factor rates and the estimated number of persons in South Dakota who are at risk for the selected risk factors. The estimated population at risk was based on 2000 census data. Table 2, on the following page, illustrates the topics covered on South Dakota's BRFSS each year from 1996 through 2003.

**Table 1**
**Estimated Percentage and Number of Persons at Risk Due to Selected Factors (Ages 18 and Older Unless Otherwise Specified): South Dakota BRFSS, 2003**

| Risk Factor | Estimated % at Risk | Estimated Population at Risk |
|---|---|---|
| Fair/Poor Health Status | 13.0 | 71,785 |
| Body Mass Index – Overweight (BMI 25.0 +) | 60.1 | 331,869 |
| Body Mass Index – Obese (BMI 30.0 +) | 22.9 | 126,453 |
| No Leisure Time Physical Activity | 21.7 | 119,826 |
| No Moderate Physical Activity | 53.5 | 295,424 |
| No Vigorous Physical Activity | 78.0 | 430,712 |
| Not Trying to Lose/Maintain Weight | 28.3 | 156,271 |
| Less Than Five Servings of Fruit and Vegetables | 81.0 | 447,278 |
| Cigarette Smoking | 22.7 | 125,348 |
| Smokeless Tobacco Use | 6.8 | 37,549 |
| Drank Alcohol in Past 30 Days | 60.8 | 335,735 |
| Binge Drinking | 19.0 | 104,917 |
| Heavy Drinking | 4.5 | 24,849 |
| Hypertension | 24.8 | 136,944 |
| High Blood Cholesterol | 31.2 | 172,285 |
| No Mammogram in Past 2 years – 40+ years old | 22.9 | 39,215 |
| Insufficient Cervical Cancer Screening | 14.6 | 41,113 |
| No Health Insurance (18-64 years old) | 10.4 | 46,183 |
| No Health Insurance (0-17 years old) | 3.6 | 7,295 |
| No Health Insurance (0-64 years old) | 8.3 | 53,478 |
| No Flu Shot – 65+ years old | 22.1 | 23,897 |
| No Pneumonia Shot – 65+ years old | 36.3 | 39,252 |
| Diabetes | 7.1 | 39,206 |
| Current Asthma | 7.3 | 40,310 |
| Arthritis | 28.8 | 159,032 |
| Arthritis with Limited Activities | 13.4 | 73,994 |
| Disability with Limited Activities | 18.8 | 103,813 |
| Disability with Special Equipment | 5.7 | 31,475 |
| Injured in a Fall – 45+ years old | 4.9 | 13,140 |
| Sunburn in Past 12 Months | 44.3 | 244,622 |

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2003

## Table 2
## Topics Covered on the South Dakota BRFSS, 1996-2003

| Topics | Year | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2003 | 2002 | 2001 | 2000 | 1999 | 1998 | 1997 | 1996 |
| Alcohol Consumption | X | X | X | | X | | X | |
| Arthritis | X | | X | | | | | |
| Assets | | | | | X | | | |
| Asthma | X | X | X | X | | | | |
| Asthma – Children | X | X | X | | | | | |
| Asthma History | | | X | | | | | |
| Binge Drinking | X | | | | | | | |
| Cancer | | | | | X | | | |
| Cardiovascular Disease | | X | | | | | | |
| Care Giving | | | | X | | | | |
| Cholesterol Awareness | X | X | X | | X | | X | |
| Colorectal Cancer Screening | | X | X | | X | | X | |
| Diabetes | X | X | X | X | X | X | X | X |
| Diabetes – Children | X | X | | | | | | |
| Disability | X | | X | | | | | |
| Exercise | X | X | X | X | | X | | X |
| Falls | X | | | | | | | |
| Family Planning | | X | | X | X | X | | |
| Farm Accidents | | | | | | | | X |
| Firearms | | X | X | | | | | X |
| Folic Acid | | X | | X | | X | X | |
| Food Handling/Safety | X | X | | X | | | | X |
| Food Poisoning | | | | | | X | | |
| Health Care Access | X | X | X | X | X | X | X | X |
| Health Care Coverage – Children | X | X | X | X | X | X | | |
| Health Care Coverage and Utilization | | X | | | | | | |
| Health Status/Healthy Days | X | X | X | X | X | X | X | X |
| HIV/AIDS | X | X | X | X | X | X | X | X |
| Hunger | | | | | | | X | |
| Hypertension Awareness | X | X | X | | X | | X | X |
| Immunization | X | X | X | X | X | | X | |
| Injury – Children | X | X | X | | X | X | X | X |
| Injury Control/Seat Belts | | X | X | | X | | X | X |
| Lead Poisoning | | | | | | | | X |
| Nutrition/Fruits & Vegetables | X | X | | X | X | X | X | X |
| Oral Health | | X | | | X | | X | X |
| Oral Health – Children | X | | X | X | | | | |
| Osteoporosis | | | | | | | | X |
| Physical Activity | X | | X | | | | | |
| Pregnancy | | | | | | | X | |
| Preventive Counseling | | | | | | | | X |
| Prostate Cancer Screening | | X | X | | | | X | |
| Sexual Behavior | | | | | X | X | | X |
| Sleeping Position of Infant | | | | | | | X | |
| Special Health Conditions – Children | X | X | X | X | | X | | X |
| Sun Exposure/Skin Cancer | X | | | X | X | | | |
| Tobacco – Smokeless | X | | X | | | | | X |
| Tobacco Indicators | X | | X | | | | | |
| Tobacco Products | | | X | | | | | |
| Tobacco Use | X | X | X | X | X | X | X | X |
| Veteran's Status/Health | X | | | | | | | |
| Weight Control | X | X | | X | | X | | X |
| Women's Health | X | X | X | X | X | X | X | X |

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2003